

#### **3.3.3.4 Mesic Prairie**

##### **3.3.3.4.1 Community Overview**

Although common historically, this type is extremely rare today. This grassland community occurs on rich, moist, well-drained sites, usually on level or gently rolling glacial topography. The dominant plant is the tall grass, big bluestem. The grasses little bluestem, Indian grass, needle grass, prairie dropseed, and switch grass are also frequent. The forb layer is diverse in the number, size, and physiognomy of the species. Common taxa include the prairie docks, lead plant, heath and smooth asters, prairie coreopsis, prairie sunflower, rattlesnake-master, flowering spurge, bee-balm, prairie coneflower, and spiderwort.

At the time of European settlement it is estimated that this type occupied over 800,000 acres in southern Wisconsin. Today one would be hard pressed to make the case that even 100 acres of intact tallgrass prairie still exists. The present rarity of this type is due to its high productivity for agricultural uses, such as corn and soybean production. It was associated with other tallgrass prairie communities, various wetland types, and oak openings.

##### **3.3.3.4.2 Vertebrate Species of Greatest Conservation Need Associated with Mesic Prairie**

Twenty-five vertebrate Species of Greatest Conservation Need were identified as moderately or significantly associated with mesic prairie (Table 3-87).

**Table 3-87. Vertebrate Species of Greatest Conservation Need that are (or historically were) moderately or significantly associated with mesic prairie communities.**

<b><i>Species Significantly Associated with Mesic Prairie</i></b>
<b>Birds</b>
Northern Harrier
Greater Prairie-chicken
Barn Owl
Short-eared Owl
Dickcissel
Henslow's Sparrow
Bobolink
Eastern Meadowlark
<b>Herptiles</b>
Butler's Garter Snake
Eastern Massasauga Rattlesnake
<b><i>Species Moderately Associated with Mesic Prairie</i></b>
<b>Birds</b>
Blue-winged Teal
Northern Bobwhite
American Golden Plover
Upland Sandpiper
Marbled Godwit
Willow Flycatcher
Field Sparrow
<b>Herptiles</b>
Pickerel Frog
Blanding's Turtle
Black Rat Snake
Bullsnake
Western Ribbon Snake
Timber Rattlesnake
<b>Mammals</b>
Franklin's Ground Squirrel
Prairie Vole

In order to provide a framework for decision-makers to set priorities for conservation actions, the species identified in Table 3-87 were subject to further analysis. The additional analysis identified the best opportunities, by Ecological Landscape, for protection, restoration, and/or management of both mesic prairie and associated vertebrate Species of Greatest Conservation Need. The steps of this analysis were:

- Each species was examined relative to its probability of occurrence in each of the 16 Ecological Landscapes in Wisconsin. This information was then cross-referenced with the opportunity for protection, restoration, and/or management of mesic prairie in each of the Ecological Landscapes (Tables 3-88 and 3-89).
- Using the analysis described above, a species was further selected if it had both a significant association with mesic prairie and a high probability of occurring in an Ecological Landscape(s) that represents a major opportunity for protection, restoration and/or management of mesic prairie. These species are shown in Figure 3-15.

**Table 3-88. Vertebrate Species of Greatest Conservation Need that are (or historically were) *significantly* associated with mesic prairie communities and their association with Ecological Landscapes that support mesic prairie.**

Mesic Prairie	Birds (8)*								Herptiles (2)	
Ecological Landscape grouped by opportunity for management, protection, and/or restoration of this community type	Northern Harrier	Greater Prairie-Chicken	Barn Owl	Short-eared Owl	Dickcissel	Henslow's Sparrow	Bobolink	Eastern Meadowlark	Butler's Garter Snake	Eastern Massasauga Rattlesnake
MAJOR										
Southeast Glacial Plains										
Southwest Savanna										
Western Prairie										
IMPORTANT										
Southern Lake Michigan Coastal										
Western Coulee and Ridges										
PRESENT (MINOR)										
Central Sand Hills										
Central Sand Plains										


Color Key


= HIGH probability the species occurs in this Ecological Landscape


= MODERATE probability the species occurs in this Ecological Landscape

= LOW or NO probability the species occurs in this Ecological Landscape

**Color Key**

 = HIGH probability the species occurs in this Ecological Landscape

 = MODERATE probability the species occurs in this Ecological Landscape

 = LOW or NO probability the species occurs in this Ecological Landscape

\* The number shown in parentheses is the number of Species of Greatest Conservation Need from a particular taxa group that are included in the table. Taxa groups that are not shown did not have any Species of Greatest Conservation Need that met the criteria necessary for inclusion in this table.

Table 3-89. Vertebrate Species of Greatest Conservation Need that are (or historically were) *moderately* associated with mesic prairie communities and their association with Ecological Landscapes that support mesic prairie.

Mesic Prairie	Birds (7)*							Herptiles (5)					Mammals (2)		
Ecological Landscape grouped by opportunity for management, protection, and/or restoration of this community type	Blue-winged Teal	Northern Bobwhite	American Golden Plover	Upland Sandpiper	Marbled Godwit	Willow Flycatcher	Field Sparrow	Pickering Frog	Blanding's Turtle	Black Rat Snake	Bullsnake	Western Ribbon Snake	Timber Rattlesnake	Franklin's Ground Squirrel	Prairie Vole
MAJOR															
Southeast Glacial Plains															
Southwest Savanna															
Western Prairie															
IMPORTANT															
Southern Lake Michigan Coastal															
Western Coulee and Ridges															
PRESENT (MINOR)															
Central Sand Hills															
Central Sand Plains															

Color Key

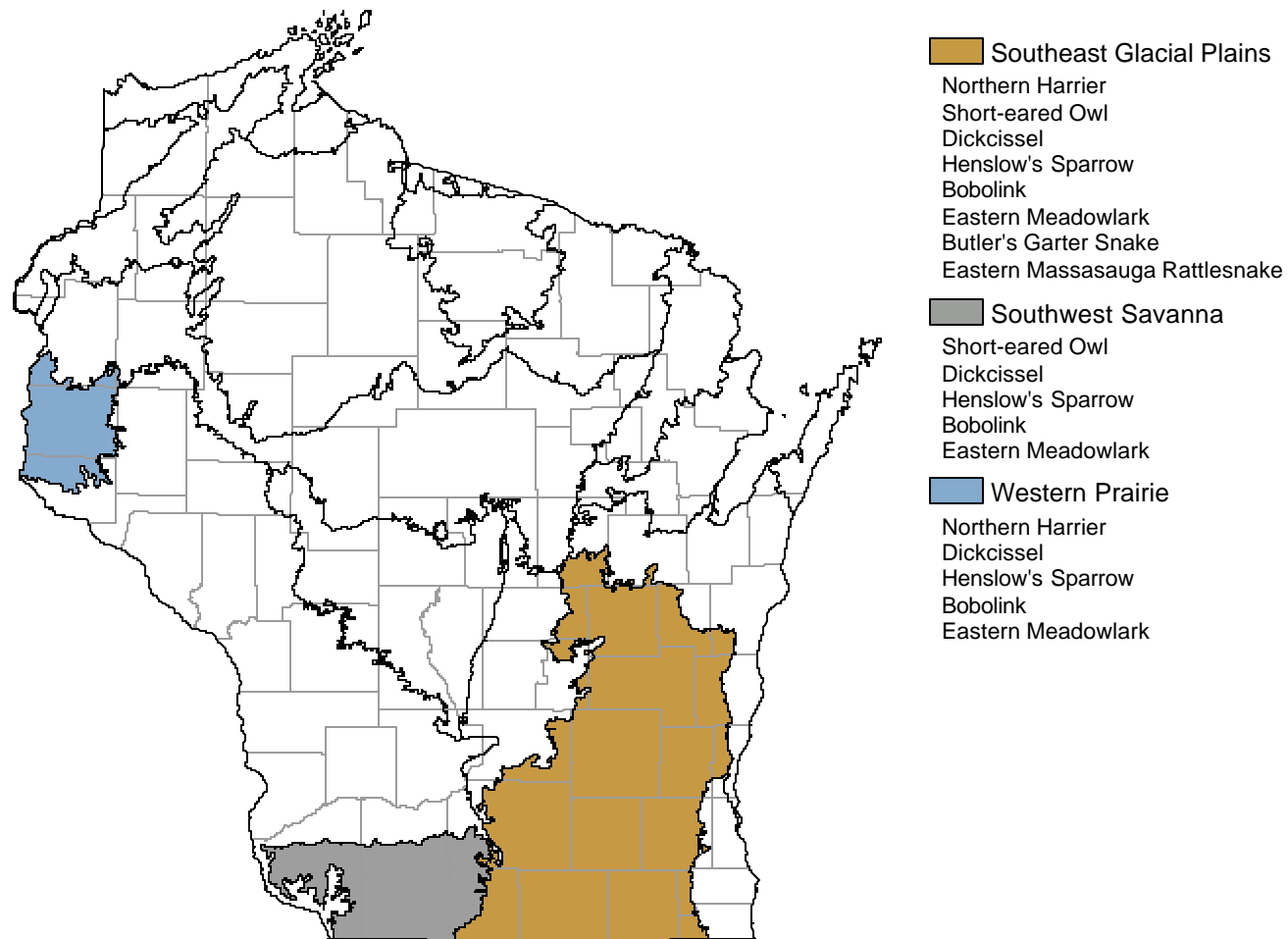
 = HIGH probability the species occurs in this Ecological Landscape

= MODERATE probability the species occurs in this Ecological Landscape

= LOW or NO probability the species occurs in this Ecological Landscape

\* The number shown in parentheses is the number of Species of Greatest Conservation Need from a particular taxa group that are included in the table. Taxa groups that are not shown did not have any Species of Greatest Conservation Need that met the criteria necessary for inclusion in this table.

**Figure 3-15. Vertebrate Species of Greatest Conservation Need that have both a significant association with mesic prairie and a high probability of occurring in an Ecological Landscape(s) that represents a major opportunity for protection, restoration and/or management of mesic prairie.**



### **3.3.3.4.3 Threats and Priority Conservation Actions for Mesic Prairie**

#### **3.3.3.4.3.1 Statewide Overview of Threats and Priority Conservation Actions for Mesic Prairie**

The following list of threats and priority conservation actions were identified for mesic prairie in Wisconsin. The threats and priority conservation actions described below apply to all of the Ecological Landscapes in Section 3.3.3.4.3.2 unless otherwise indicated.

##### Threats and Issues

- Very few examples of this type exist today. Most mesic prairies were converted to agricultural uses.
- Most remnants are small and isolated, and can be difficult to manage. Managing for fire-sensitive invertebrates is needed but complicates management of the fire-dependent vegetation, especially on small sites.
- Genetic and species diversity of mesic prairie plants and animals may be declining because of small population size and population isolation.
- Lack of fire and encroachment by woody species and weeds is a problem.
- Housing developments and urban expansion can limit the opportunity to manage with prescribed fire or reconnect sites. Lack of land use planning limits opportunities to manage or restore this community type.
- Past grazing has degraded many sites. Grazing can cause simplification and encourage the expansion of invasive plants.
- Invasives are a problem and out-compete native species. Problem species include non-native grasses such as smooth brome, Kentucky bluegrass, Canada bluegrass, crown vetch, sweet clover, wild parsnip, multiflora rose, and Eurasian honeysuckles.
- Remnants that occur within rights-of-way are especially vulnerable to disturbance or destruction. Rights-of-way prairies are often mowed, graded, sprayed or used as places to dispose of junk or on which to “store” waste materials.
- In agricultural areas herbicide drift can be a problem.
- In more residential areas, off-road vehicle use has damaged many prairies.
- Restoration is often difficult to achieve due to lack of funds and limited species composition in “restoration” sites.

##### Priority Conservation Actions

- Restoration is required for this community type to ensure that it is adequately represented in our future landscapes.
- Preserve, buffer, and enlarge existing sites where they exist. Manage and conduct restorations as a complex with other grassland and wetland types.
- Promote private management (e.g., via the Prairie Enthusiasts) of small sites where possible.
- Offer incentives to preserve or restore this community type, including incentives to limit grazing.
- Develop educational tools and demonstration areas that promote understanding of prairies, the benefits of prescribed fire, and address liability concerns and questions.
- Follow existing management guidelines for prescribed burning to minimize impacts on sensitive species. Consider needs of fire-sensitive invertebrates and other species when burning, and burn only part of each site in each burn.
- Maintain and establish connectivity where possible.
- Monitor these sites to determine whether management is maintaining native diversity.
- Continue and support research to find biocontrols for invasives; control spread of new invasives.

### **3.3.3.4.3.2 Additional Considerations for Mesic Prairie by Ecological Landscape**

Special considerations have been identified for those Ecological Landscapes where major or important opportunities for protection, restoration, and/or management of mesic prairie exist. Those considerations are described below and are in addition to the statewide threats and priority conservation actions for mesic prairie found in Section 3.3.3.4.3.1.

#### Additional Considerations for Mesic Prairie in Ecological Landscapes with **Major** Opportunities for Protection, Restoration, and/or Management

##### *Southeast Glacial Plains*

Relatively few remnants exist (e.g., Westport Drumlins on the north side of knolls (Dane County), Arlington Prairie (Columbia County), Empire Prairie, White River Marsh Wildlife Area (Green Lake County), and Sugar River Trail Prairie (Green County)). Most remnants are small and isolated. Prairie inventories are needed for sites near Madison in the southwest portion of the Ecological Landscape and around the southern portion of the Kettle Moraine. A few additional remnants occur in the Lake Winnebago area, in railroad rights-of-way, but structure is often altered and species diversity is diminished. Several very small occurrences have been documented in railroad rights-of-way in and around Horicon Marsh. Additional inventory may be needed in the northern part of the Ecological Landscape (Fond du Lac and Winnebago Counties). Some sites are impacted by herbicides from both ground and aerial applications.

##### *Southwest Savanna*

Few occurrences exist in this Ecological Landscape today, and most of them are small and isolated. There are, however, some good restoration opportunities, or opportunities to manage remnants within large acreages of surrogate prairie grassland within generally open landscapes. Examples include Ipswich Prairie State Natural Area (Grant and Lafayette counties), the Military Ridge Prairie Heritage Area (Iowa County), the Highway 39 Grasslands (Green County), Belmont Prairie (Lafayette County), and Stony Creek Prairie (Iowa County).

##### *Western Prairie*

Historically, this Ecological Landscape was a major area for tallgrass prairie communities, including mesic prairie on the uplands. This is the only landscape in Wisconsin where prairie potholes were characteristic landscape features. Very few remnants remain. In most areas, the land was plowed right down to the edge of the potholes. The few existing remnants, all of which are small should be preserved and buffered with compatible community types such as surrogate prairie grassland. Potholes should also be incorporated into these complexes. Large-scale construction/restoration of sites is needed. Grassland sites in this landscape should be surveyed and assessed to identify unplowed areas of former prairie with high restoration potential.

Examples of mesic prairie include Roberts Railroad Prairie and the Hammond Cemetery Prairie (both in St. Croix County). The best restoration opportunities are probably associated with the state and federal waterfowl production areas, where there is good potential to manage complexes made up of ponds, lakes, wetlands, and surrogate grasslands.

Additional Considerations for Mesic Prairie in Ecological Landscapes with **Important** Opportunities for Protection, Restoration, and/or Management

*Southern Lake Michigan Coastal*

Remaining sites should be preserved where they exist (e.g., remnants at Bong Recreation Area, and limited parts of Chiwaukee Prairie Preserve in Kenosha County). Other examples are found at Kansasville Railroad Prairie and Sturtevant Mesic Prairie (Racine County) and Benedict Prairie (Kenosha County). These occurrences are all small and most occur within rights-of-way, where they are highly vulnerable to inadvertent damage or destruction.

*Western Coulees and Ridges*

All sites are small and isolated. Past conversion to agriculture has impacted virtually all former mesic prairie in this Ecological Landscape. A few small, degraded examples of this type still exist. There is some potential that additional inventory efforts could yield undiscovered remnants, but none of these would be large. Restoration opportunities should focus on areas where there are extensive surrogate prairie grasslands, other prairie or savanna remnants, or areas where open wetlands are common.